

***FlyBy Math™* Alignment**
Missouri Mathematics
Grade-Level Expectations

Strand: Algebraic Relationships

1. Understand patterns, relations and functions

B. Create and analyze patterns

Grade-Level Expectation

Represent and analyze patterns using words, tables and graphs. (MA 4 1.6,3.6)

***FlyBy Math™* Activities**

--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

3. Use mathematical models to represent and understand quantitative relationships

A. Use mathematical models

Grade-Level Expectation

Model problem situations and draw conclusions, using representations such as graphs, tables or number sentence. (MA 4 1.6,3.6)

***FlyBy Math™* Activities**

--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

4. Analyze change in various contexts

A. Analyze change

Grade-Level Expectation

Identify, model and describe situations with constant or varying rates of change. (MA 4 1.6,4.1)

***FlyBy Math™* Activities**

--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.

Strand: Geometric and Spatial Relationships

2. Specify locations and describe spatial relationships using coordinate geometry and other representational systems

A. Use coordinate systems

Grade-Level Expectation

Use coordinate systems to specify locations, describe paths and find the distance between points along horizontal and vertical lines. (MA 2 1.6,1.8)

***FlyBy Math™* Activities**

--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.

Strand: Measurement	
1. Understand measurable attributes of objects and the units, systems and processes of measurement.	
<i>C. Tell and use units of time</i>	
Grade-Level Expectation Solve problems involving elapsed time (hours).	<i>FlyBy Math™</i> Activities --Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.

Strand: Data and Probability	
2. Select and use appropriate statistical methods to analyze data.	
<i>B. Compare data representations</i>	
Grade-Level Expectation Compare different representations of the same data and evaluate how well each representation shows important aspects of the data. (MA 3 3.6)	<i>FlyBy Math™</i> Activities --Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
3. Develop and evaluate inferences and predictions that are based on data.	
<i>A. Develop and evaluate inferences</i>	
Grade Level Expectation Given a set of data make and justify prediction(s). (MA 3 3.1,4.1)	<i>FlyBy Math™</i> Activities --Predict outcomes and explain results of mathematical models and experiments.